

## CLAIMS

### WHAT IS CLAIMED IS:

- 1           1. An image capture system comprising:  
2                 an image input for obtaining image information; and  
3                 a processing unit coupled to the image input for determining an image  
4                 metric on the image information, the processing unit for initiating a  
5                 capture sequence when the image metric meets a predetermined  
6                 condition.
  
- 1           2. The image capture system of claim 1, wherein the image metric includes  
2                 photometric data, and wherein the predetermined condition is met when the  
3                 photometric data reaches a predetermined threshold.
  
- 1           3. The image capture system of claim 1, wherein the image metric includes  
2                 light intensity information, and wherein the predetermined condition is met when the  
3                 light intensity information reaches a predetermined threshold.
  
- 1           4. The image capture system of claim 1, wherein the image metric includes  
2                 light intensity information, and wherein the predetermined condition is related to a  
3                 rate of change of the light intensity information.

1           5. The image capture system of claim 1, wherein the image metric includes  
2           colorimetric data, and wherein the predetermined condition is met when the  
3           colorimetric data reaches a predetermined threshold.

1           6. The image capture system of claim 1, wherein the image metric includes  
2           colorimetric data, and wherein the predetermined condition is related to a rate of  
3           transition of the colorimetric data.

1           7. The image capture system of claim 1 further comprising:  
2                 a port for receiving parameters specifying the predetermined condition.

1           8. The image capture system of claim 1 further comprising:  
2                 an interface for allowing input of the predetermined condition.

1           9. The image capture system of claim 1, wherein the image input is an image  
2           sensor.

1           10. The image capture system of claim 1 further comprising:  
2                 a storage unit for storing the image information during the capture  
3                 sequence.

1           11. A method of selecting an image, the method comprising the steps of:

- 2 (a) specifying an image profile;  
3 (b) generating a histogram from an input image;  
4 (c) determining whether the histogram of the input image matches the  
5 image profile;  
6 (d) if the histogram of the step (c) does not match the image profile, then  
7 repeating steps (b) and (c) for subsequent input images until the  
8 histogram of one of the subsequent input images matches the image  
9 profile.

- 1 12. The method of claim 11 further comprising the steps of:  
2 (e) responsive to a match between one of the input images and the image  
3 profile, saving to a storage medium the image corresponding to the  
4 histogram that matches the image profile.

- 1 13. The method of claim 12 further comprising the steps of:  
2 (f) saving to the storage medium one or more images captured  
3 chronologically preceding the image saved in the step (e).

- 1 14. The method of claim 11 wherein the input image of the step (b) is  
2 provided by an image sensor in an image capture device.

1           15. The method of claim 11, wherein the steps (a)-(d) are performed  
2 responsive to a search for a target image having the image profile, the method  
3 further comprising the steps of:

4                   (e) indicating that the target image has been found.

1           16. The method of claim 11 wherein the input image of the step (b) is  
2 provided from an input from a video stream.

1           17. A method of detecting that an image meets a predetermined image profile,  
2 the method comprising the steps of:

3                   (a) sampling a first image;

4                   (b) determining an image metric for the first image;

5                   (c) comparing the image metric for the first image with the  
6                               predetermined image profile; and

7                   (d) storing the first image when the image metric for the first image  
8                               matches the predetermined image profile.

1           18. The method of claim 17 wherein the image metric comprises a luminosity  
2 component, and the predetermined image profile is matched when the luminosity  
3 component reaches a predetermined threshold.

1           19. The method of claim 17 wherein the image metric comprises a color  
2 component, and the predetermined image profile is matched when the color  
3 component reaches a predetermined threshold.

1           20. The method of claim 17 wherein the predetermined image profile is  
2 generated by the steps of:

- 3           (i) creating a mock up image;  
4           (ii) determining an image metric associated with the mock up image;  
5           (iii) selecting one or more threshold values; and  
6           (iv) forming the predetermined image profile from the selected threshold  
7 values.

1           21. A method of detecting an image comprising the steps of:

- 2           (a) sampling two images at different points in time;  
3           (b) determining an image metric for the two images;  
4           (c) measuring a rate of change of the image metric;  
5           (d) indicating that there is a match with an image profile if the rate of  
6 change of the image metric matches a first predetermined condition.

1           22. The method of claim 21 further comprising the step of:

- 2           (e) sampling a subsequent image;  
3           (f) determining a second image metric for the subsequent image;

4 (g) measuring a rate of change of the second image metric;  
5 (h) indicating that there is a match with the image profile if the rate of  
6 change of the second image metric matches a second predetermined  
7 condition.

1 23. The method of claim 21 wherein the step (d) of indicating that there is a  
2 match with an image profile is accomplished by triggering an image capture  
3 sequence.

1 24. An image capture system comprising:  
2 a sensor for capturing image data;  
3 a histogram unit for generating an image metric from the image data  
4 captured by the sensor; and  
5 a memory unit for storing the image data when the image metric meets a  
6 predetermined condition.

1 25. The image capture system of claim 24 further comprising:  
2 a timing device coupled to the histogram unit for determining a rate of  
3 change of the image metric.

1 26. A method of creating an image profile for selecting an image, the method  
2 comprising the steps of:

- 3           (a) determining image metrics from two images;
- 4           (b) identifying one or more of the image metrics that differ between the
- 5                 two images by at least a predetermined amount; and
- 6           (c) determining one or more thresholds based on the one or more image
- 7                 metrics identified in the step (b).